other management strategies. Associated increases in MAP, weight, and serum creatinine at the time of PRES compared to baseline measurements exemplify the importance of possible prevention through more aggressive blood pressure and fluid management strategies in this patient population.

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A COMPARISON OF CALCULATED GLOMERULAR FILTRATION RATE (GFR) VS. MEASURED GFR IN A BLOOD AND MARROW TRANSPLANT POPULATION

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One of the most controversial topics in clinical practice is the estimation of a patient's creatinine clearance (CrCl) and determination of renal function. The gold standard in determining the glomerular filtration rate (GFR) involves a 24 hour urine collection, which can be onerous to patients and potentially inaccurate. As a result, the most common method to determine GFR utilizes the Cockcroft-Gault equation (CG) and Modification of Diet in Renal Disease (MDRD) equation. One limitation with the CG equation is the debate regarding which weight should be utilized.

Up until January 2010, a 24 hr collected CrCl was standard practice at Moffitt Cancer Center (MCC) for patients undergoing hematopoietic cell transplant (HCT) to assess patients' renal function. Because of the potential concerns with the collected 24 hour CrCl, the department decided to calculate GFR utilizing the CG equation.

We performed a retrospective analysis to assess whether calculated CrCl using actual, adjusted, or ideal body weight best correlated with CrCl determined by 24 hour urine collection. The HCT database was queried for all patients transplanted at MCC between January 1, 2009 through December 31, 2009. From a total 355 patients, we randomly selected 200 autologous and allogeneic patients for evaluation.

The correlation between the calculated CrCl based on actual, adjusted, and ideal body weight and collected CrCl was determined. Pearson correlation coefficients of log-transformed data are presented in Table 1.The magnitude of correlation was greatest for CrCl based on ideal body weight and collected CrCl, and statistical comparison between competing approaches for calculated CrCl (according to actual, adjusted, or ideal body weight) confirmed that the correlation between ideal body weight and collected was significantly greater than that for either actual ($p < 0.0001$) or adjusted ($p < 0.0001$).

Table 1. Pearson Correlation Coefficients, N = 200

	L_CrCl_Actual	L_CrCl_Ideal	L_CrCl_Adj	L_Collected_CRCl
L_CrCl_Actual*	1.00000	0.81541 p < 0.0001	0.96953 p < 0.0001	0.60256 p < 0.0001
L_CrCl_Ideal^	0.81541 p < 0.0001	1.00000	0.92888 p < 0.0001	0.71345 p < 0.0001
L_CrCl_Adj&	0.96953 p < 0.0001	0.92888 p < 0.0001	1.00000	0.67072 p < 0.0001
L_Collected_CRCl	0.60256 p < 0.0001	0.71345 p < 0.0001	0.67072 p < 0.0001	1.00000

L = log-transformed data; * = Creatinine clearance based off of actual body weight; ^ = Creatinine clearance based off of ideal body weight; & = Creatinine clearance based off of adjusted body weight.

These data indicate that ideal body weight-based calculated creatinine clearance most closely approximates collected creatinine clearance. Based on these results, we recommend ideal body weight for such calculations for dosing of conditioning chemotherapy and immune suppressive agents following HCT.

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PHARMACY DRIVEN POSACONAZOLE THERAPEUTIC MONITORING IN A LEUKEMIA AND BONE MARROW TRANSPLANT CENTER

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Objectives: Posaconazole (POS) is an extended-spectrum triazole with proven efficacy for antifungal prophylaxis in patients (pts) undergoing HSCT or treatment of acute leukemia. The FDA recommends a goal POS average serum drug concentration of >700 ng/ml. We implemented a pharmacy-driven POS therapeutic monitoring program. Our primary objective was to see if pharmacy intervention can be helpful in optimizing attainment of therapeutic POS levels.

Methods: Forty-eight steady-state plasma trough POS levels (33 in HSCT pts, 15 in pts undergoing acute leukemia therapy) performed after at least 7 days of administration were analyzed.

Results: POS levels were >700 ng/ml in 19/48 (40%) pts. Mean POS level was 790 ng/ml (range 53- 2960), and median was 602 ng/ml. Of the 29 levels <700ng/ml, there were 26 dose modifications. POS was changed to another antifungal in 13 pts, POS was discontinued in 2 pts, and dose was increased in 11 pts. Of the 11 increased doses, 8 follow up levels were drawn with 4 pts achieving a documented therapeutic level. POS was being used as prophylaxis (starting dose 200mg TID) in 31 pts (65%) and empirically (starting dose 400mg BID) in 17 pts (35%). The highest dose used was 400mg QID in one pt with documented fungal infection.

GVHD was present in 16 of 33 HSCT pts (48%), and ten of the pts had gut GVHD at the time of level. POS levels were >700ng/mL in 6/16 (38%) and 2/10 (20%) of all GVHD and gut GVHD pts, respectively, although this was not statistically signficant. Proton-pump inhibitor or H2 antagonist therapy (PPI/H2) was administered concurrently with 42/48 (88%) of levels, although the use of these drugs had no apparent effect on therapeutic levels. Leukemia pts were significantly less likely to achieve therapeutic POS levels when compared to HSCT pts (27% vs 61%, $p = 0.029$). Other than treatment group, we found no other factors that correlated with achieving therapeutic levels.

Conclusion: The pharmacy based implementation of POS therapeutic monitoring revealed that achievement of recommended POS levels remains a challenge in an unselected HSCT and leukemic population. This program enabled documentation of compliance and allowed an attempt at improvement of POS levels by dose adjustment. Pharmacists counseled pts on ways to increase absorption by taking with a high fat meal, nutritional supplement, or acidic carbonated beverage, and by stopping their PPI/H2.

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REDUCED-DOSE MELPHALAN VS. STANDARD DOSE MELPHALAN FOR AUTOLOGOUS STEM CELL TRANSPLANTATION: IS THERE A DIFFERENCE IN OUTCOME?

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Background: Based on the results of randomized phase III trials, melphalan 200 mg/m^2 IV (MEL 200) is considered the standard preparative regimen for autologous hematopoietic stem cell transplantation (auto-HCT) for multiple myeloma. However, reduced doses of melphalan, 140 mg/m^2 (MEL 140) or 180 mg/m^2 (MEL 180), are often used in older patients or patients with renal dysfunction.

Methods: The primary objective was to determine if there was a difference in toxicity, treatment-related mortality, response rate, progression-free survival or overall survival in patients that received lower doses of melphalan for auto-HCT. From June 1, 1996 through December 25, 2010, 1425 patients received auto-HCT at our institution. We identified 57 patients that received MEL 140 or 180 and